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Arnett et al.

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(54) **BLENDING SYSTEM**

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A47J 43/046 (2006.01)
A47J 43/07 (2006.01)

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CPC .. A47J 43/046; A47J 43/0761; A47J 43/0772; B01F 13/0033
USPC 277/457, 514, 552, 530, 566, 626, 644; 316/314; 366/314, 205
See application file for complete search history.

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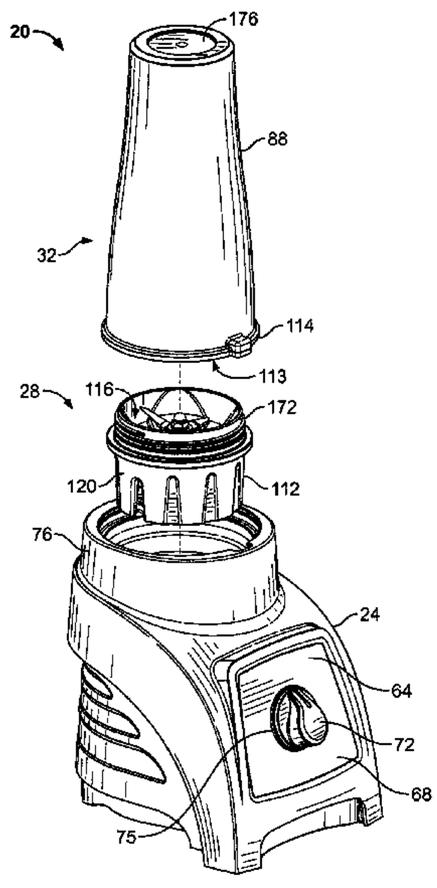
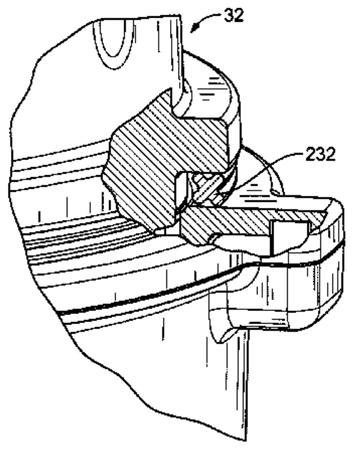
(57) **ABSTRACT**

A blending system is shown and described herein. The blending system may include a base including a motor, a blade assembly selectively and operably engaged with the base, where the motor drives the blade assembly, and a container having an inner and outer layer. The blending system may also include a magnet positioned between inner and outer layers of the container, and a sensor positioned in the base, where the magnet in operative proximity to the sensor permits operation of the motor.

14 Claims, 10 Drawing Sheets





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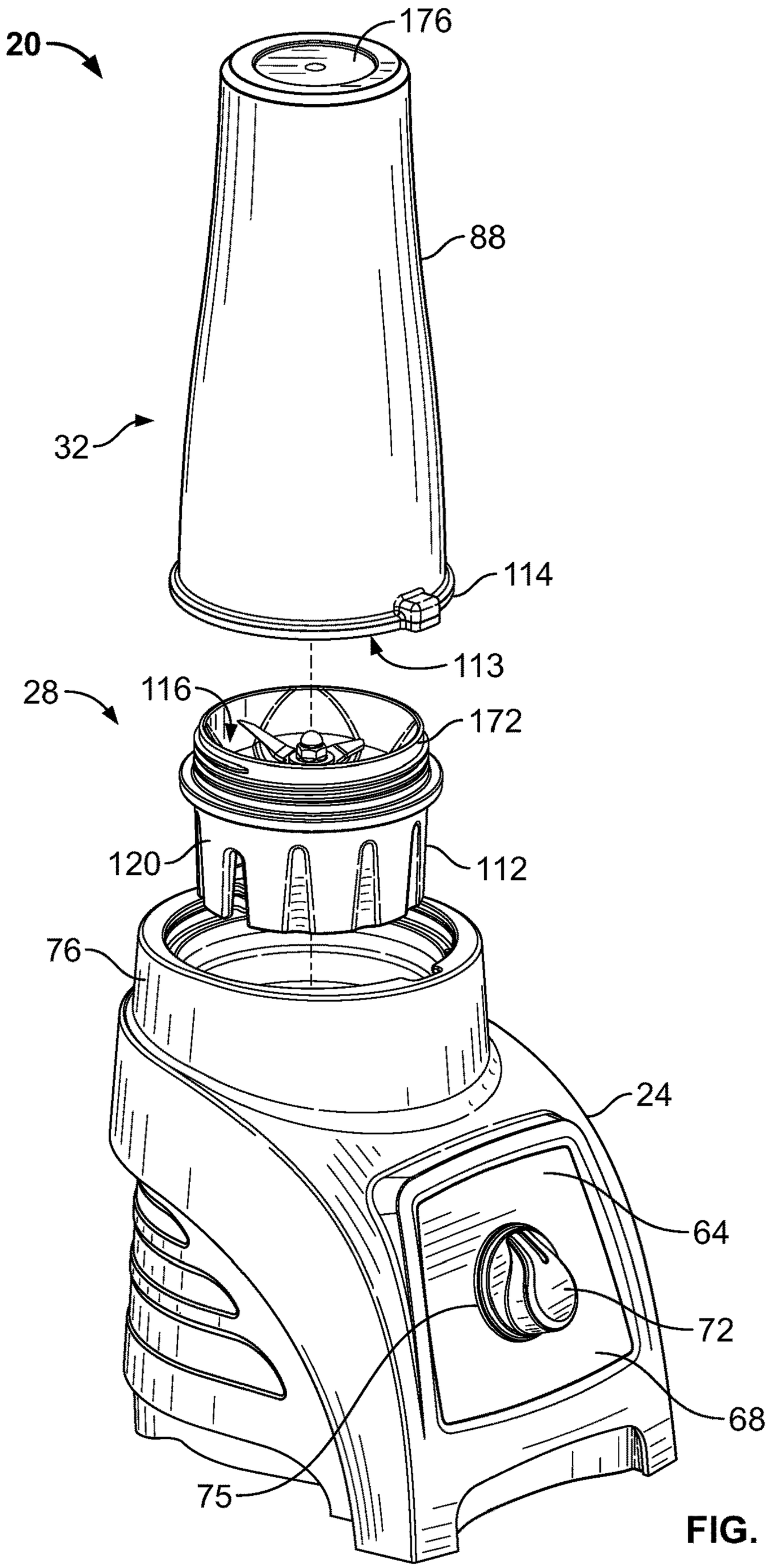

FIG. 1

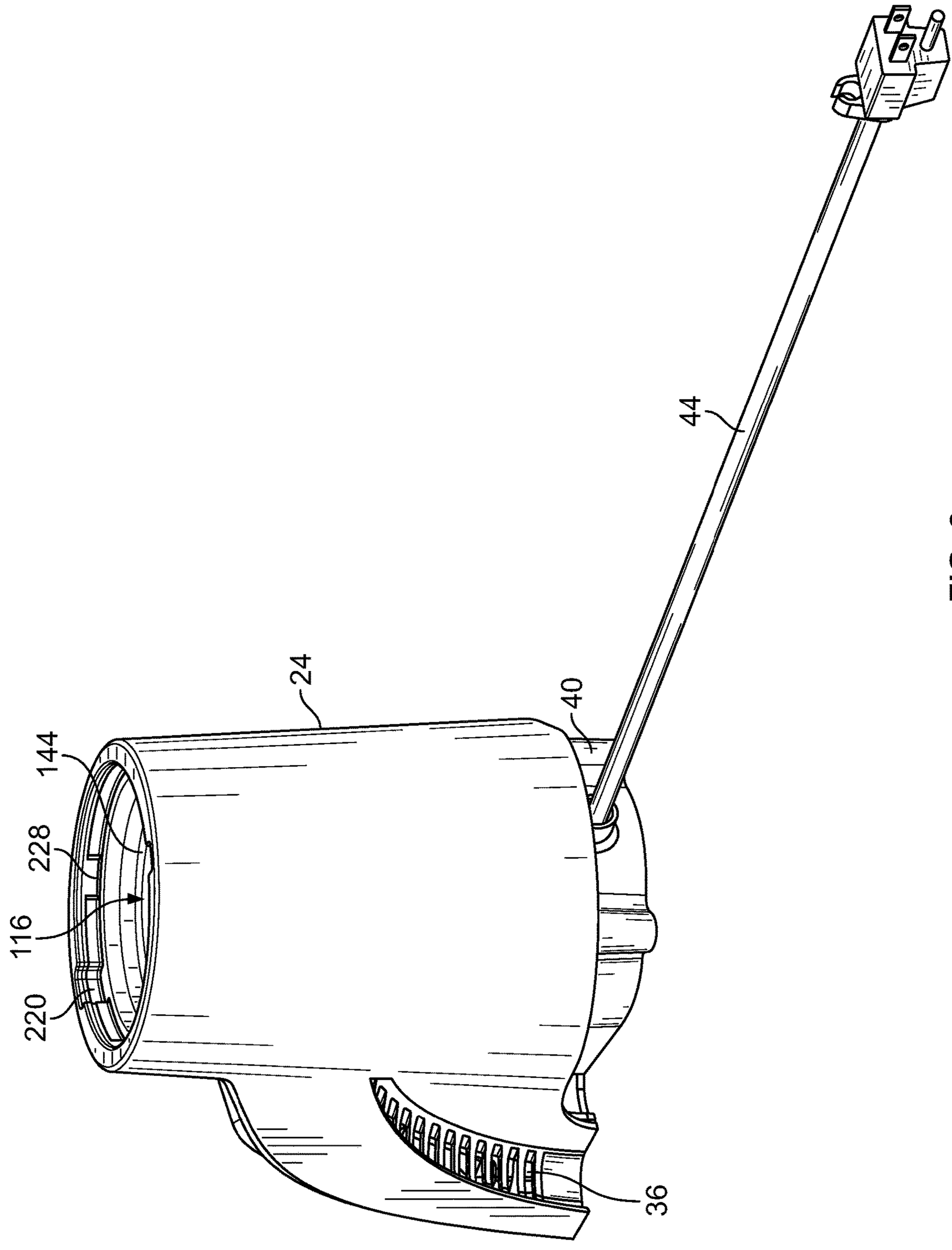

FIG. 2

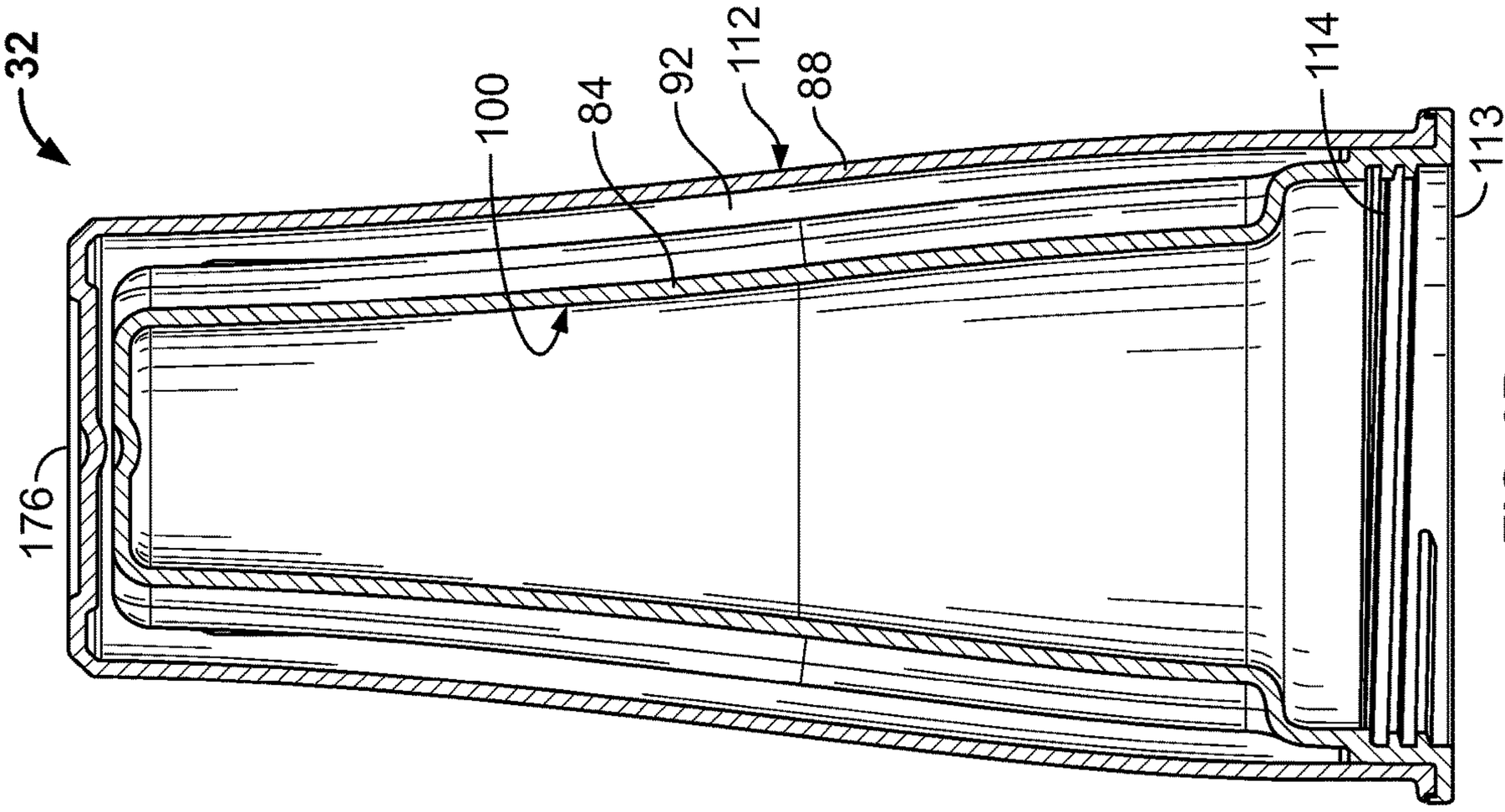
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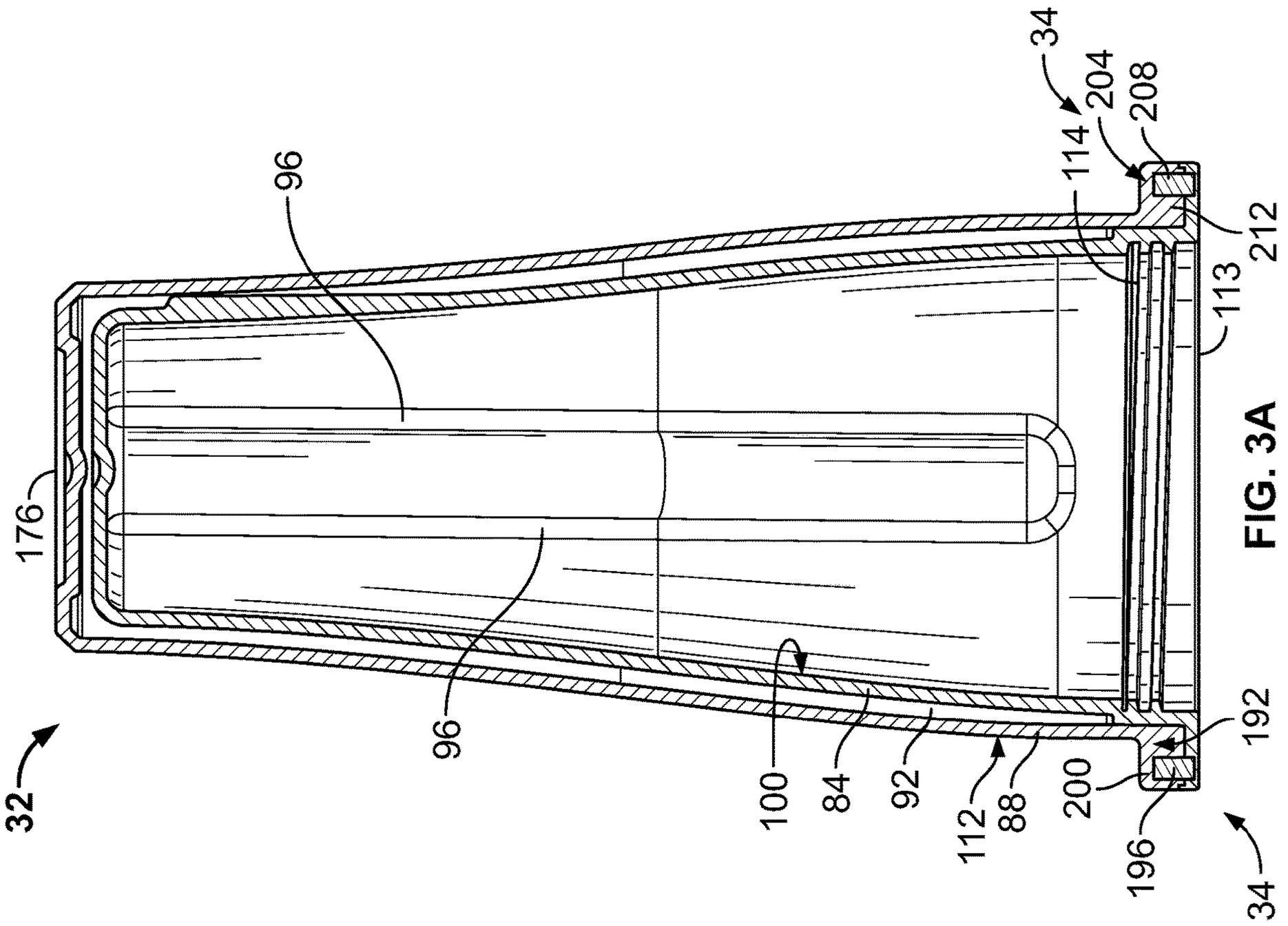
FIG. 3B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32

FIG. 3A

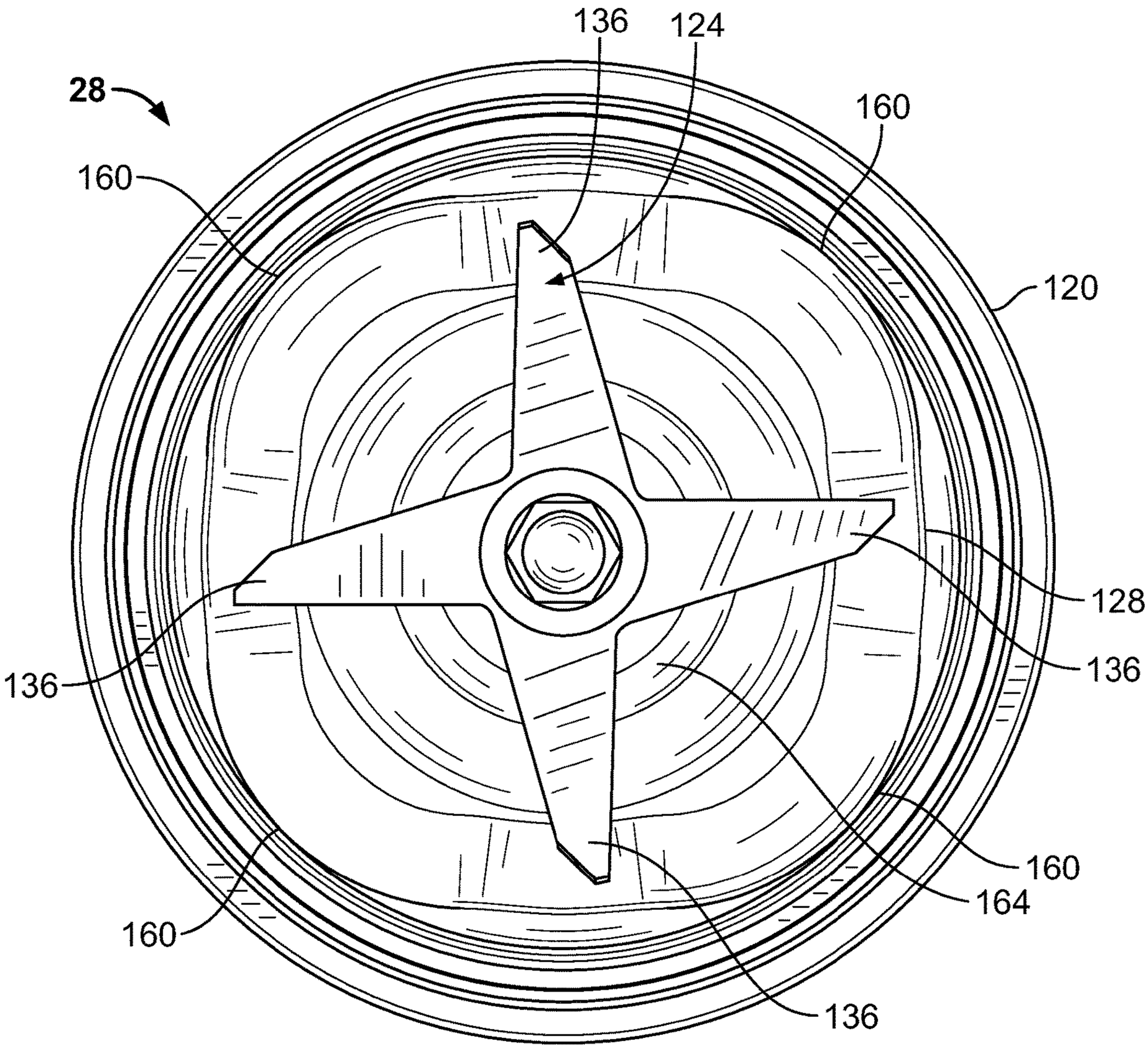

FIG. 4

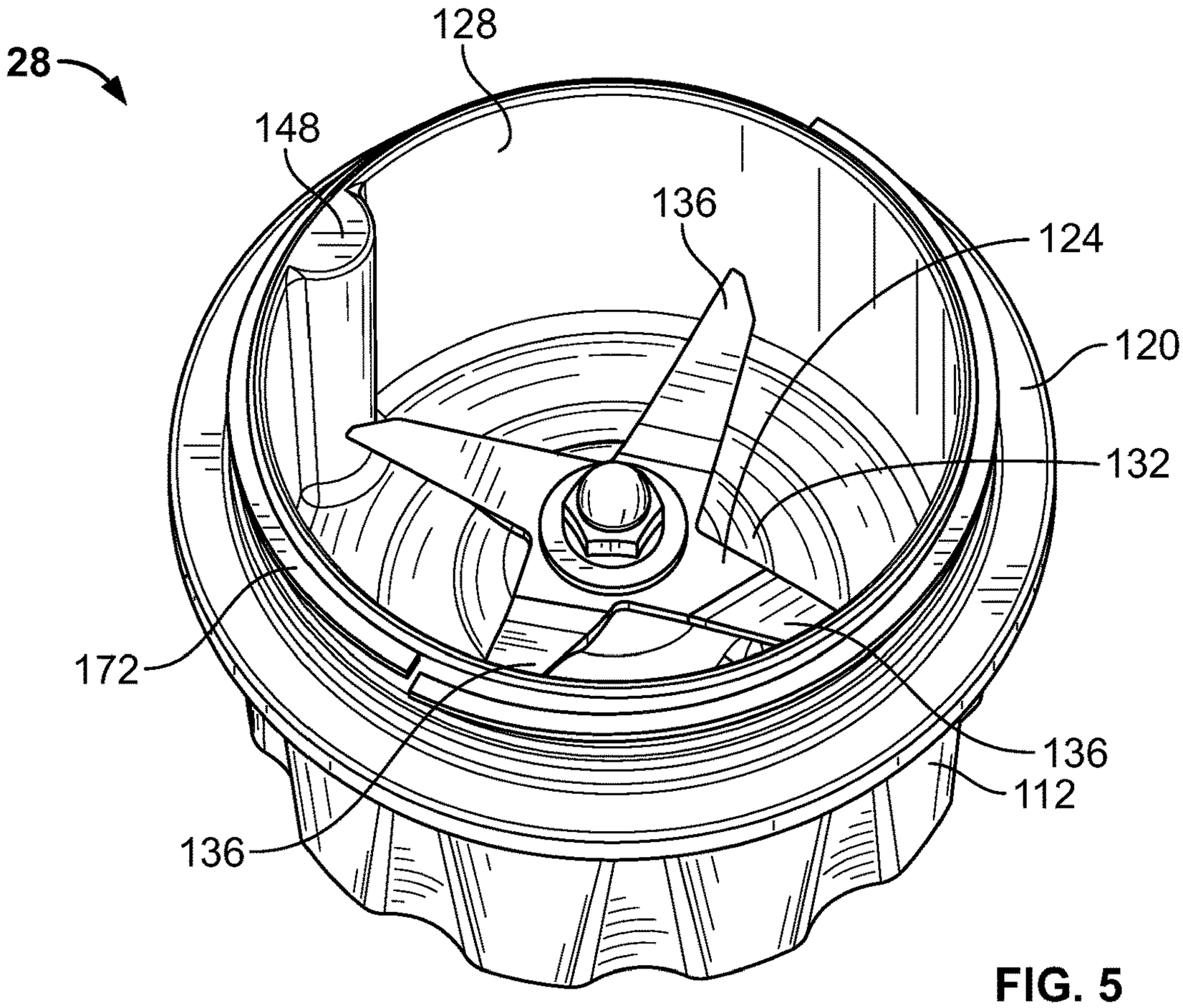

FIG. 5

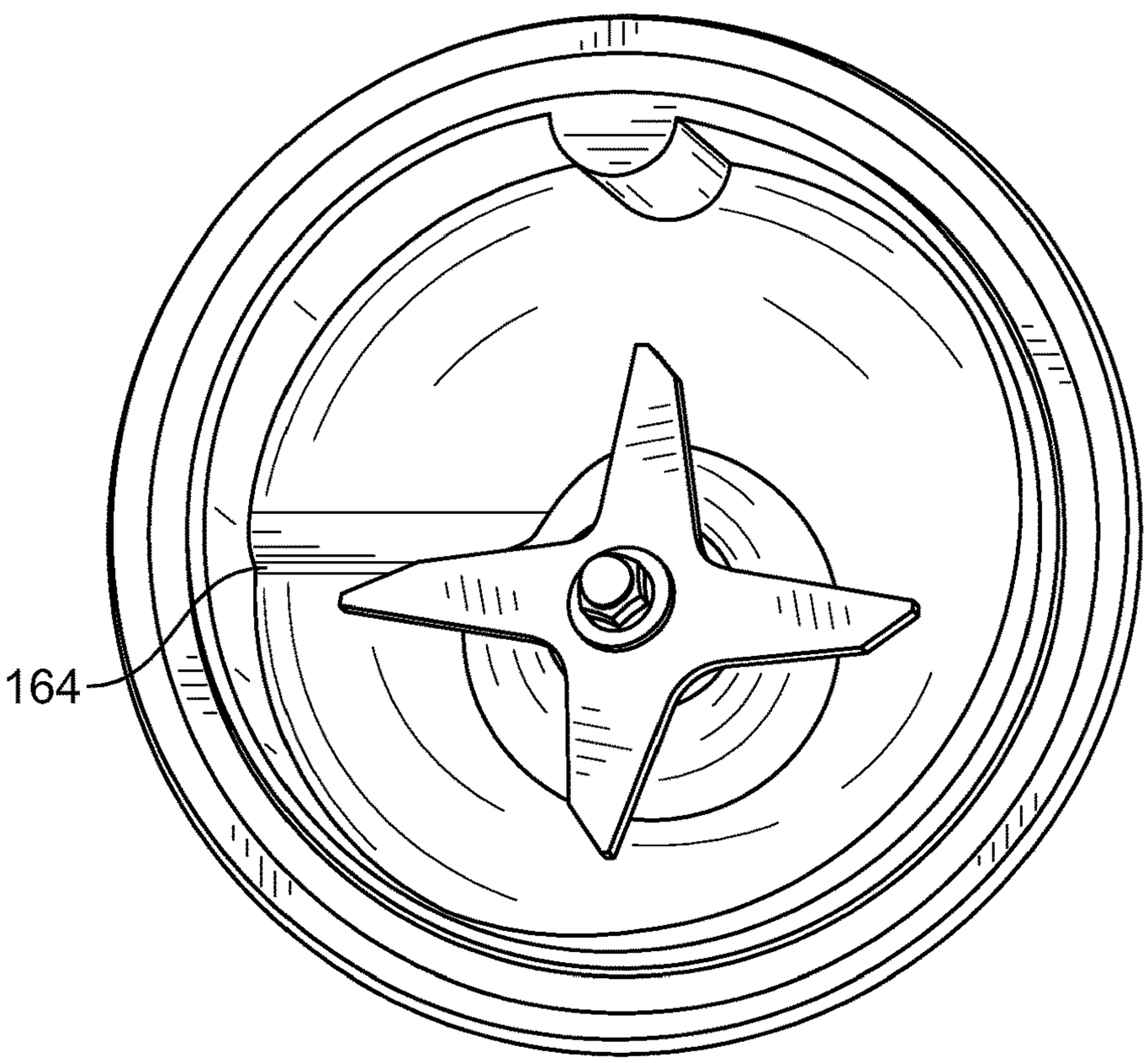

FIG. 6

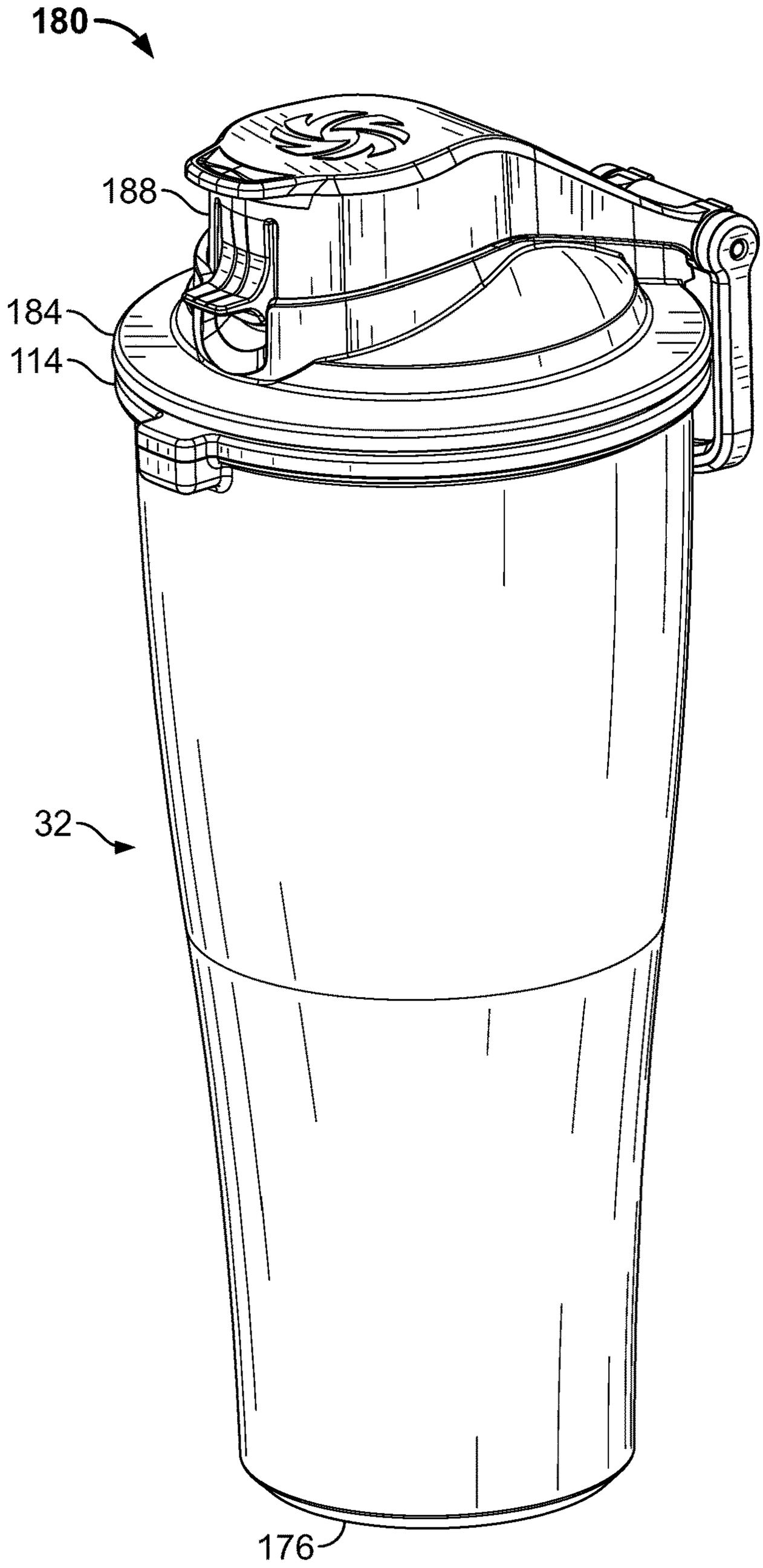

FIG. 7

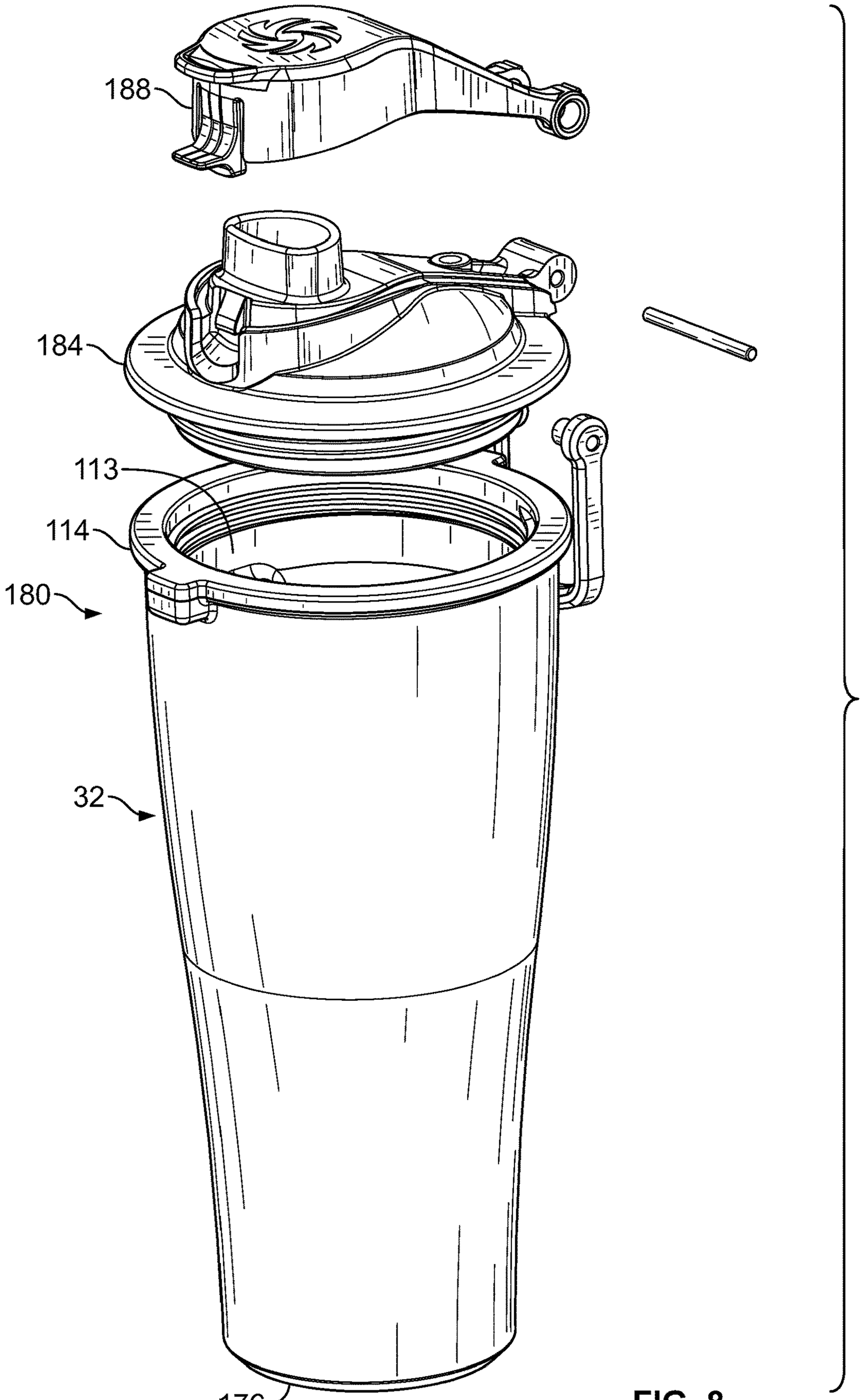

FIG. 8

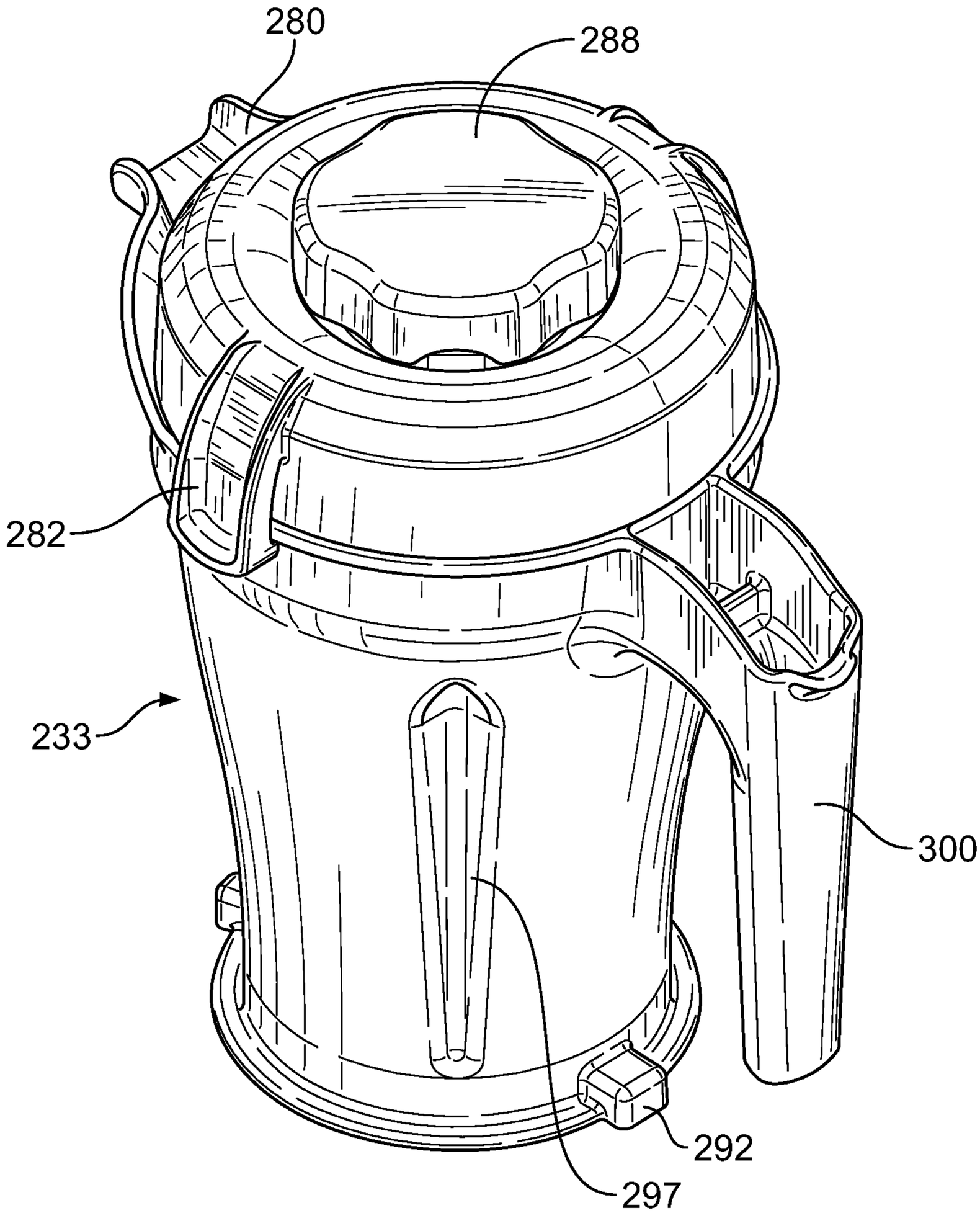

FIG. 9

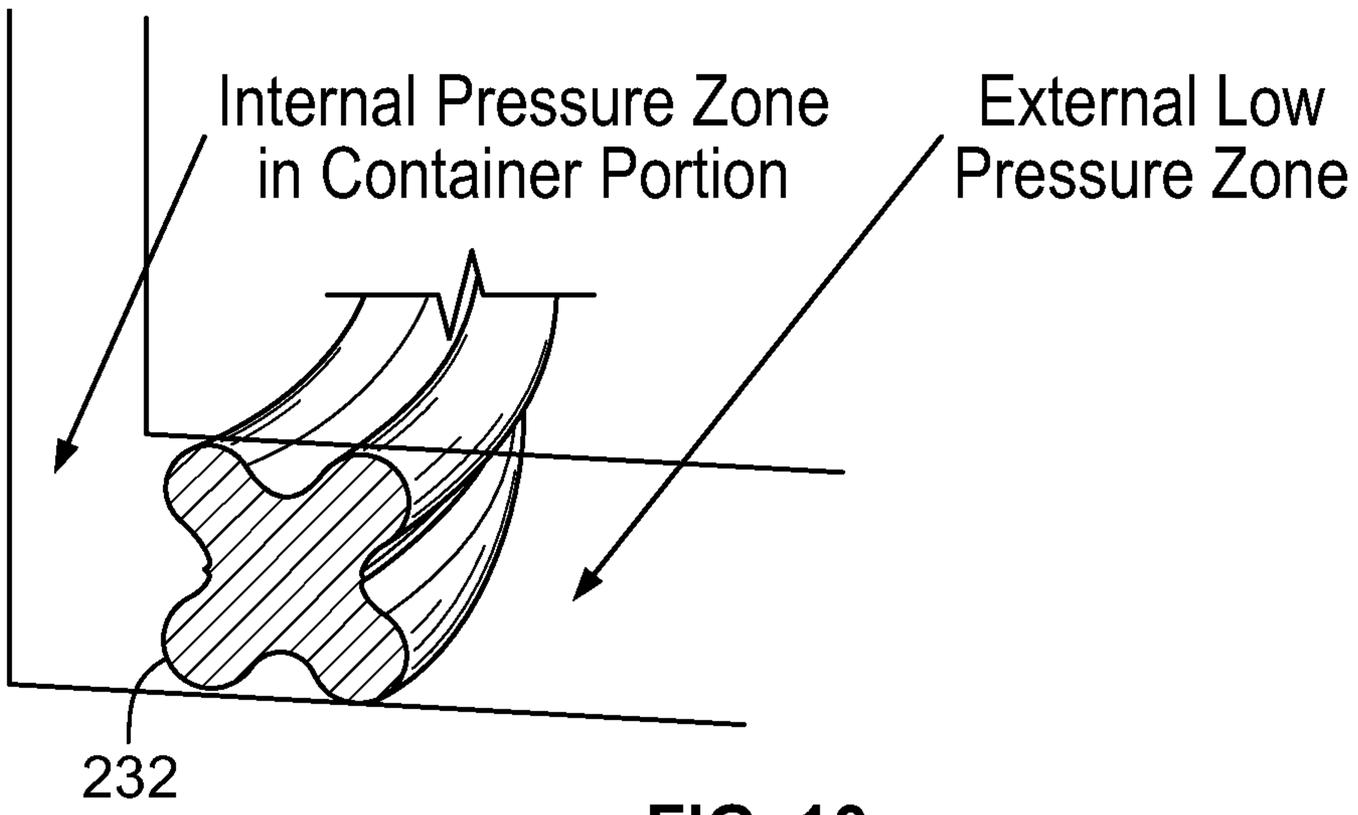
Internal Pressure Zone
in Container Portion
External Low
Pressure Zone
232

FIG. 10

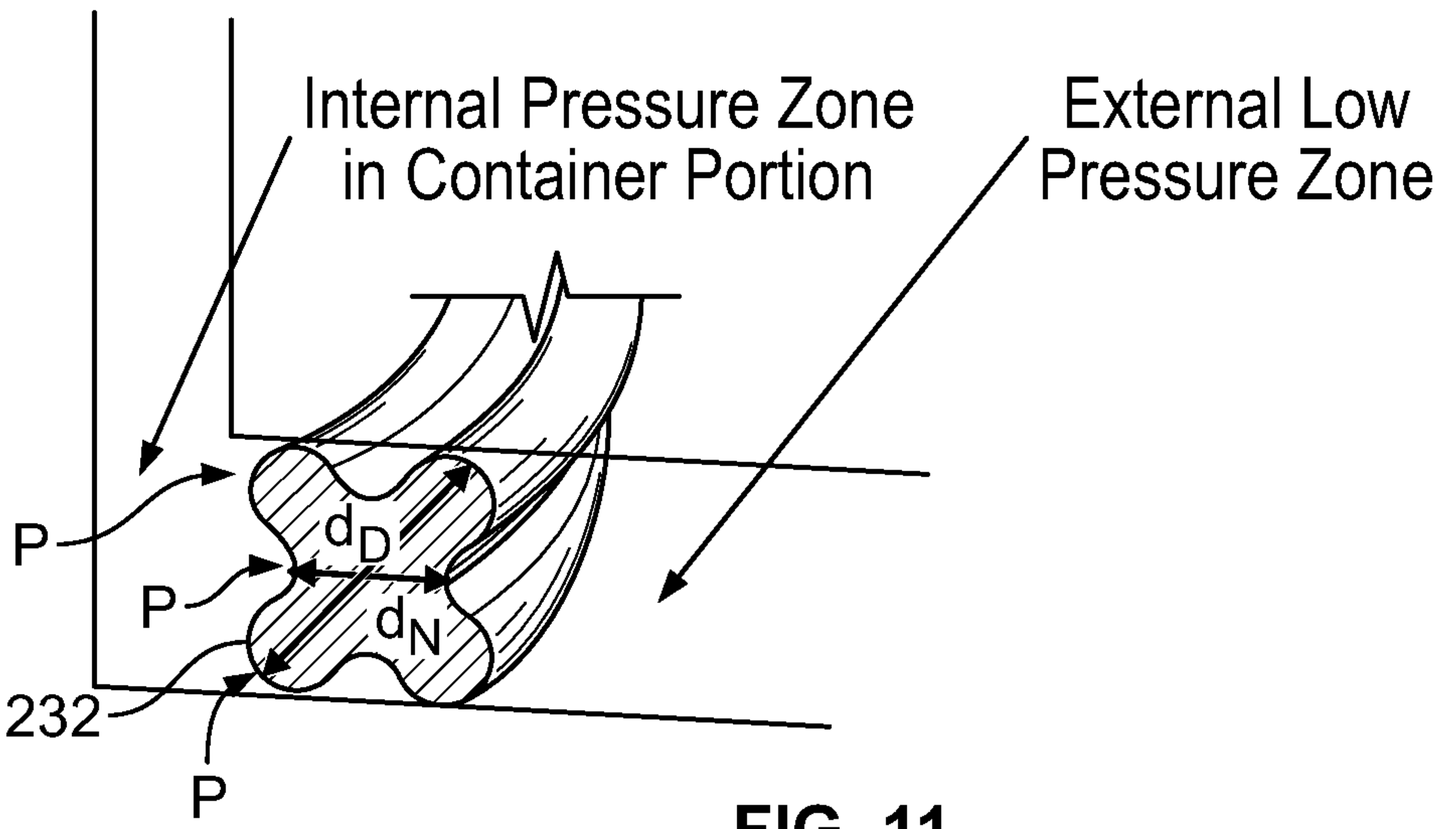
Internal Pressure Zone
in Container Portion
External Low
Pressure Zone
P
P
P
d_D
d_N
232

FIG. 11

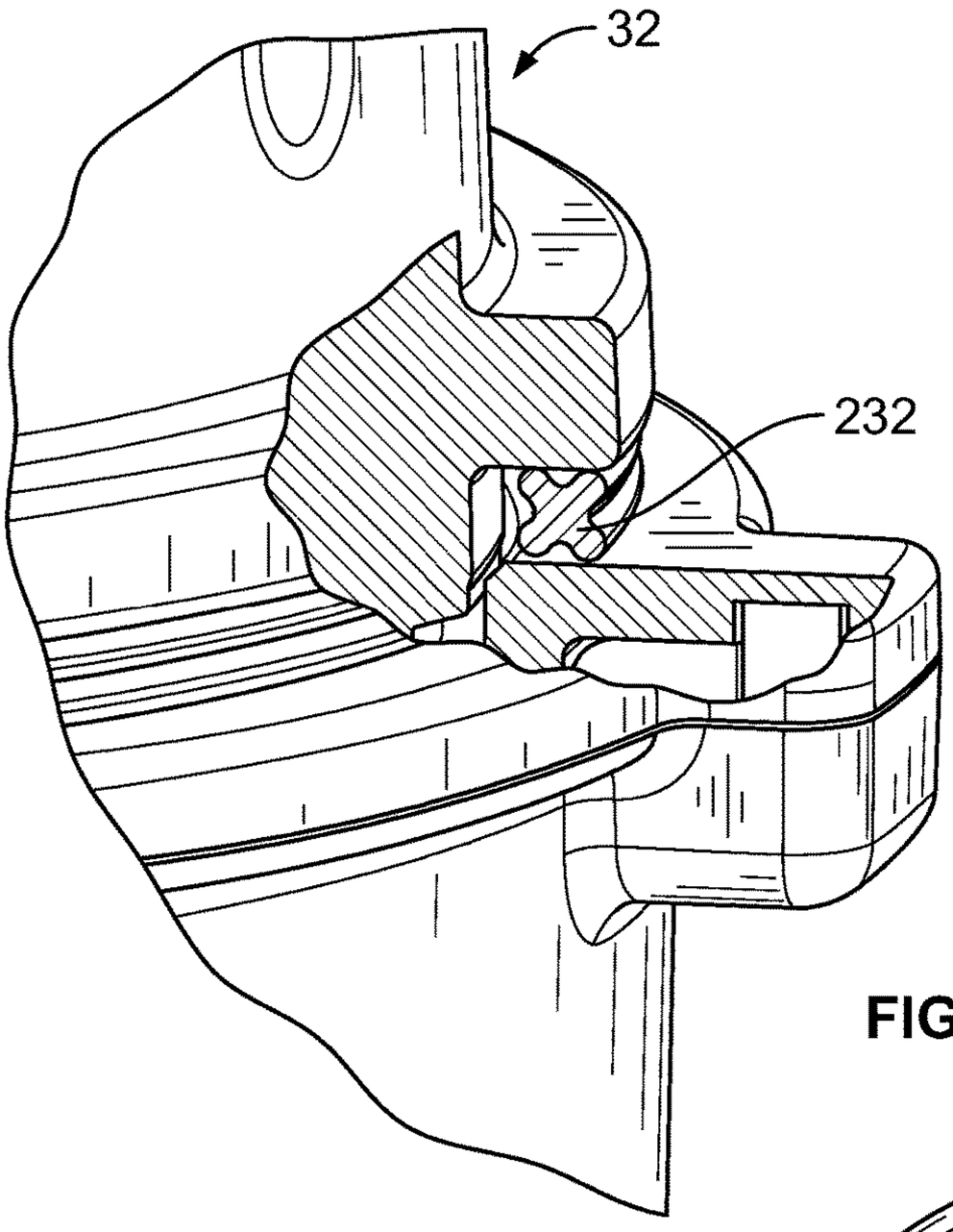

FIG. 12

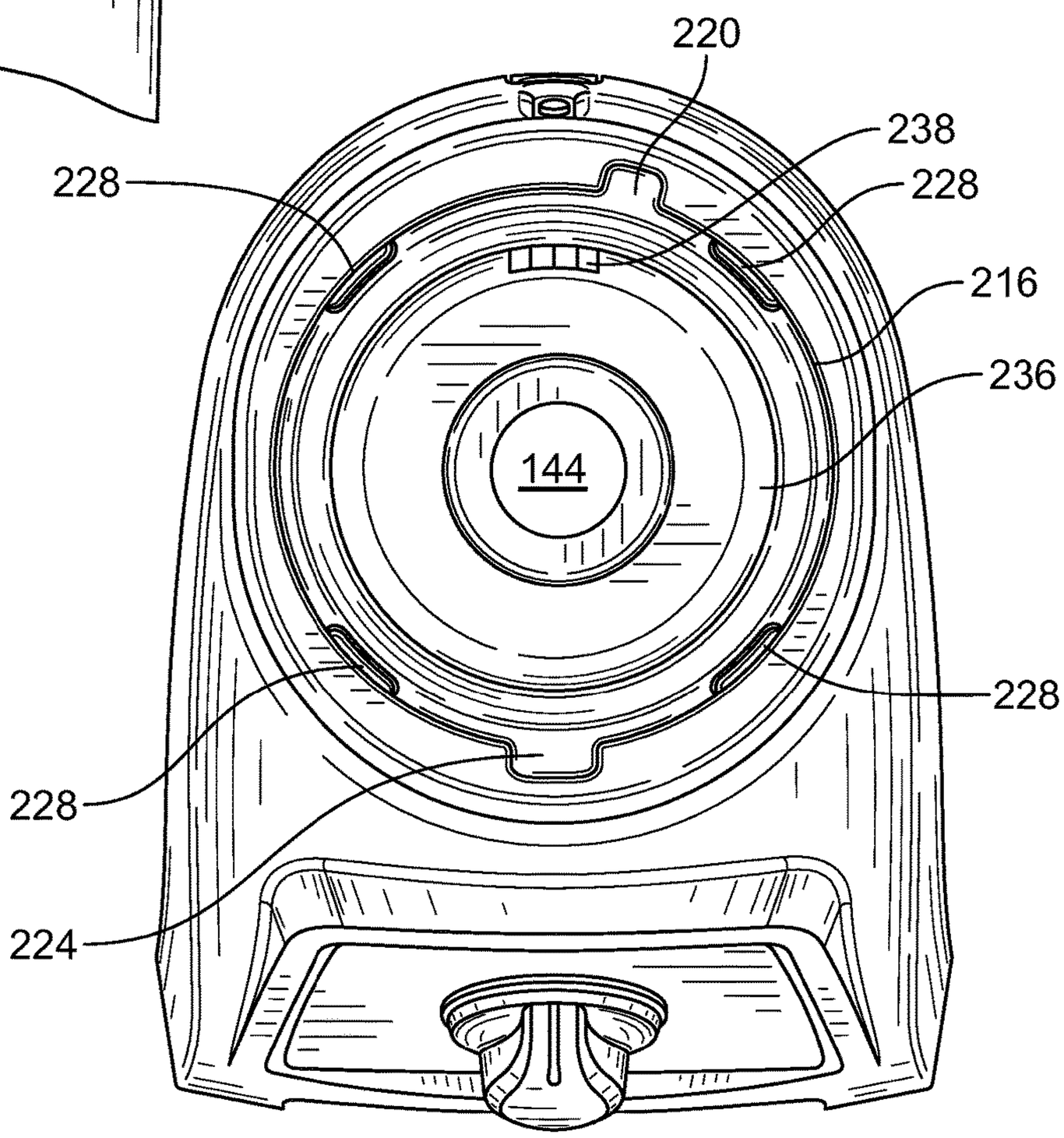

FIG. 13

BLENDING SYSTEM

CROSS-REFERENCE TO RELATED APPLICATION

This application claims the benefit of U.S. Provisional Patent Application Ser. No. 61/771,367, filed Mar. 1, 2013, and entitled "Blender System," and U.S. Provisional Patent Application Ser. No. 61/789,455, filed Mar. 15, 2013, and entitled "Quad Seal for a Blender," both of the above which are incorporated herein by reference.

TECHNICAL FIELD

The present teachings relate to a blending system, and more particularly, to a high performance, small format blending system.

BACKGROUND

Blending systems are often used to blend and process foodstuffs. In recent years, personal blending systems have been developed with blending containers that are designed to serve a dual purpose and function as both a blending container and a drinking vessel. Typically, the container may include the foods for blending and then will connect at its top with a blade assembly. Once connected, the user may invert the container/blade assembly so that the container/blade assembly engages with the personal blending system base. Once blending is completed, the user may remove the container/blade assembly from the base, invert it again, and remove the blade assembly from the cup. The user can then directly drink from that container, or insert a top on the container for later use.

The personal blending system may have an interface between the container and the blade assembly, such as an O-ring. This interface may generally prevent liquid from leaking out of the container when attached to the blade assembly. That O-ring may typically include a solid round or square cross-sectional shape. This shape may generally create an air-tight seal between the two structures.

However, those conventional personal blending systems have relatively small motors and thus, do not observe the potential pressure build-up in the container as would a blender with a high performance motor, such as a 2 HP motor. As a result, the use of a conventional sealing system with a high performance blender can create a large and unsafe pressure condition within the container.

SUMMARY

A blending system may include a base including a motor, a blade assembly selectively and operably engaged with the base, where the motor drives the blade assembly, and a container having an inner and outer layer. The blending system may also include a magnet positioned between inner and outer layers of the container, and a sensor positioned in the base, where the magnet in operative proximity to the sensor permits operation of the motor.

A blending system may include a base encasing a motor and a blade base in operative communication with the motor and selectively engaged with the base. The blade base may include an interior surface having a generally rectangular configuration, a blade positioned in proximity to the interior surface and operatively engaged with the motor, and an engagement member. The blade assembly may also include a container having a container engagement member selectively attached with the engagement member of the blade base.

A blending system may include a base encasing a motor, a blade assembly in operative communication with the motor and selectively engaged with the base, and a container selectively engaged with the blade assembly. The blending system may also include a gasket positioned between the container and blade assembly, where the gasket is configured to create a seal between the blade assembly and container at a first pressure and to allow gas to exit between the container and blade assembly at a second pressure.

DESCRIPTION OF THE DRAWINGS

The present teachings may be better understood by reference to the following detailed description taken in connection with the following illustrations, wherein:

FIG. **1** is a perspective view of a blender system with a blending container;

FIG. **2** is a perspective view of a blender base of the blender system;

FIG. **3**A is a first cross-sectional view of a blending cup;

FIG. **3**B is a second cross-sectional view of the blending cup;

FIG. **4** is a plan view of an embodiment of a blade base;

FIG. **5** is a perspective view of an embodiment of a blade base;

FIG. **6** is a plan view of an embodiment of a blade base;

FIG. **7** is a perspective view of a blending container with a lid;

FIG. **8** is an exploded view of a blending container and lid;

FIG. **9** is a perspective view of an embodiment of a blender container;

FIG. **10** is a cross-sectional view of a gasket of a blender system;

FIG. **11** is a cross-sectional view of a gasket of a blender system;

FIG. **12** is a cross-sectional view of a gasket on a blending system; and

FIG. **13** is a plan view of a blender base.

DETAILED DESCRIPTION

Reference will now be made in detail to exemplary embodiments of the present teachings, examples of which are illustrated in the accompanying drawings. It is to be understood that other embodiments may be utilized and structural and functional changes may be made without departing from the respective scope of the present teachings. Moreover, features of the various embodiments may be combined or altered without departing from the scope of the present teachings. As such, the following description is presented by way of illustration only and should not limit in any way the various alternatives and modifications that may be made to the illustrated embodiments and still be within the spirit and scope of the present teachings.

A blending system **20** of the present teachings is shown in FIG. **1**. The blending system **20** may include a blender base **24**, a blade base **28** and at least one blending container **32** of appropriate configurations. The blade base **28** may be selectively and operatively coupled with the blender base **24** and the blending container **32** as described in more detail below. The blending system **20** may include an interlock feature **34** that may generally prevent operation of the blending system when and if the blending container and blade base **28**

become disengaged as described in more detail below. The blending system **20** may have a smaller configuration than traditional blending systems. The blending system **20** may have a smaller footprint and smaller profile than traditional blending systems. The blending system **20** may be considered a personal or individual blending system. However, it should be understood that the present teachings are not limited to personal blending system. The present teachings may apply to any appropriate blending system.

As shown in FIG. **2**, the blender base **24** may be any appropriate size and configuration. The blender base **24** may be of a configuration to house and generally protect the operative components of the blending system **20**. The blender base **24** may house a high performance motor, gearing, sound damping components, and fan (all not shown). These operative components may be of any appropriate configuration—the present teachings are not limited to any specific configuration.

The blender base **24** may include vents **36** of any appropriate configuration. The vents **36** facilitate exhaustion of air generated within the blender base **24**.

The motor **40** may be in operative communication with a power cord **44** configured to operatively communicate with a power supply source to provide the appropriate power to operate the blending system **20**. The power cord **44** may be of any appropriate configuration—the present teachings are not limited to the configurations shown and described herein.

As shown in FIG. **1**, the blender base **24** may include a control panel **64** positioned on a face **68** of the blender base **24**. The control panel **64** may be of any appropriate configuration and may be utilized to set the operative condition of the blending system **20** by the user. By way of a non-limiting example, the control panel **64** may include a knob **72** to selectively adjust settings of the blending system **20**, including, without limitation setting rotational speed of the blade base **28** during operation of the blending system **20**. The knob **72** can also be used to reset the system, turn the system on/off, select preprogrammed functions, and/or select a pulse function. It will be appreciated that the control panel **64** may further include alternative or additional input devices, such as buttons and switches, and other feedback and readout devices, such as an LCD or LED display.

The blender base **24** may include a pedestal **76** at a top portion of the blender base **24**. The pedestal **76** may be of any appropriate shape and size and can be materially integral with the blender base **24**. By way of a non-limiting example, the pedestal **76** may be sized and shaped to cooperate with the blade base **28** as described in more detail below. The pedestal **76** may be of a shape such that an interior of the pedestal **76** corresponds with the external shape of the blade base **28**. In the present example, the interior shape of the pedestal **76** and the external shape of the blade base **28** are generally circular.

The blending system **20** includes a first blending container **32** that may be of any appropriate configuration shape and size. The first blending container **32** may be of a configuration to act as a single serve container, i.e., it is a smaller size than a standard blender. The first blending container **32** may also be of a configuration to act as a drinking vessel. The first blending container **32** may be a variety of sizes, including, but not limited to, a 20 oz., 24 oz., 32 oz., or a 40 oz . . . size.

The first blending container **32** may be a double-walled container having an inner layer **84** and an outer layer **88** spaced from the inner layer **84**. A space **92** may be formed between the inner and outer layers **84**, **88**. The space **92** may provide an insulative feature to the first blending container **32**, i.e., it may help the contents thereof remain cool or warm, as applicable. Further, the first blending container **32** may include elongated ribs **96** projecting from an interior side **100** of the inner layer **84** into a blending are of the first blending container **32**. The ribs **96** may comprise one or more protrusions generally spanning a length of the blending container **32**. In the present example, there are two ribs spaced at opposing sides of the first blending container **32**. The ribs **96** may be configured to aid in agitating the contents of the first blending container **32** during blending.

The first blending container **32** also includes a plurality of fins **97** positioned between an outer wall of the inner layer **84** and an inner wall of the outer layer **88**. One or more fins **97** can project outwardly from the outer wall of the inner layer **84** or alternatively or additionally, one or more fins **97** can project inwardly from the inner wall of the outer layer **88**.

The first blending container **32** may include an open end **113** through which material may be inserted in advance of blending or may exit after blending. The open end **113** may be of any appropriate configuration and size. The open end **113** may be of a configuration to permit a user to drink directly therefrom. This may result in the first blending container **32** being capable of utilization as a drinking vessel. The first blending container **32** may include an engaging portion **114** configured to operatively and selectively engage with the blade base **28**. The engaging portion **114** may be of any appropriate configuration and type, including, without limitation being a threaded portion, a bayonet engaging member, or the like. Regardless of the configuration of the engaging portion **114**, when secured to an outside portion **112** of the blade base **28**, additional blending space is created between an interior portion of the blade base **28** and the open end **113** of the first blending container **32**, as will be described in greater detail herein.

FIGS. **5** and **6** illustrate two different embodiments of the blade base **28**. Each embodiment of the blade base **28** may be sized and shaped to operatively fit within an opening **116** in the pedestal **76** in any appropriate manner. The blade base **28** may include a housing **120** having a first side and a second side. A blade **124** is positioned within the first side of the housing **120**. The housing **120** may be of any appropriate configuration. As shown in FIG. **4**, the housing **120** may include a rectangular inner wall **128** wherein the corners are used for agitating the contents of the attached blender container, as will be described herein. Alternatively, as shown in FIG. **6**, the housing **120** may include a generally circular inner wall **128** with one or more projections used for agitation. The blade **124** may be connected to the housing **120** in any appropriate manner. The blade **124** may be of any appropriate configuration, type and size. The present teachings are not limited to the configuration shown and described. By way of a non-limiting example, the blade **124** can be of a conventional blender blade configuration and, as such, includes a plurality of radially extending blades **136** that are carried by, and positioned above a bottom surface of the blender base **28** by a vertically oriented blade shaft. The blade shaft extends downwardly through a hub to the second side of the blender base **28**. A spline is secured to the end of the blade shaft on the second side of the blender base **28**. The spline of the blade shaft engages with a splined coupler positioned within the pedestal, the splined coupler being connected to a motor shaft. Accordingly, when the blade base **28** is positioned within the pedestal **76**, rotation of the

motor shaft caused by actuation of the motor is thereby transferred to the blades, which are rotatably positioned within the blade base.

As mentioned above, the blade base **28** may include features to agitate the flow of material with the blender container **32**. For example, the blade base **28** may break up flow of material within the blender container **32** during operation of the blending system **20**. In the embodiment shown in FIG. **5**, the blade base **28** may include a protrusion **148** on the inner wall **128** of the housing **120**. The protrusion **148** may be of any appropriate shape and size. By way of a non-limiting example, the protrusion **148** may be a protrusion **148** extending from the inner wall **128**. The protrusion **148** may be any appropriate shape, such as generally rounded. The protrusion **148** may be monolithically formed with the inner wall **128** or may be attached through a subsequent operation. The protrusion **148** may be approximately ½ inch in diameter. The protrusion **148** may extend from a length of the blade base **28** from the bottom wall **132** to an open top end **152**. It will be appreciated that the blade base **28** may include more than one protrusion **148**. The blade base **28** may also include an agitator **164** positioned on the bottom wall **132**. The agitator **164** may be of any appropriate configuration and is not limited to that shown and described. Further, any appropriate number of agitators **164** may be utilized, e.g., one, two, three, etc. In some embodiments, the blade base **28** may not include an agitator **164**. The agitator **164** may include a ramped surface formed in the bottom wall **132**. The ramped surface may be of any appropriate configuration, including, without limitation being a helical ramp formed with the bottom wall **132**. The agitator **164** may be monolithically formed with the bottom wall **132** or may be attached through a subsequent operation. The agitator **164** may form a ledge **168** in the bottom wall **132**, which may be utilized to disrupt the flow pattern of the material during use of the blending system **20**. The blade base **28** may include one or more agitator **164**; the present teachings are not limited to that shown. Further, the bottom wall **132** may not include an agitator **164**.

In addition or alternatively, as shown in FIG. **4**, the inner wall **128** of the blade base **28** may be of a shape to agitate the flow of material within the blending container **32** during operation thereof. In these embodiments, the base **132** may have a generally rectangular shape such as a generally square shape

The engagement between the blade base **28** and the first and/or second blending container is such that corners **160** of the square-shaped inner wall **128** align with the ribs **96** formed within the inner wall of the container. The alignment of the corners **160** and the ribs **96** increases the agitation of the material in the container during the blending operation, thereby improving the blend quality and enhancing the blender performance. Once aligned, the user can also visually confirm that the blade base **28** is operatively secured with the blending container **32**.

The blade base **28** may include an engaging portion **172** configured to operatively and selectively secure with the engaging portion **114** of the blending container **32**. The engaging portion **172** may be of any appropriate configuration. By way of a non-limiting example, the engaging portion **172** may be a threaded portion **172** configured to mate with the threaded portion **114** of the container portion **32**. In these embodiments, the threaded portion **114** of the container portion **32** may be generally circular and the threaded portion **172** of the blade base **28** may correspondingly circular in shape. As described above, the first blending container **32** may be configured as a drinking vessel. In these embodiments, the first blending container **32** is able to easily convert from a blending container to a drinking vessel. For example, in addition to the open end **113** noted above, the first blending container **32** may include a closed end **176** generally opposite the open end **113**. When the first blending container **32** is operatively secured to the blade base **28**, the housing **120** of the blade base **28** is configured such that the housing **120** may create additional blending space for the material to be blended. As an example, the location of the blade **124** within the housing **120** may be generally cup-shaped, which may provide this additional blending space. When removed from the blade base **28**, the first blending container **32** may function as a drinking vessel. In some embodiments, the first blending container **32** may include a lid assembly **180** that is selectively engageable with the open end **113** of the first blending container **32**. The lid assembly **180** may be of any appropriate configuration. For example, the lid assembly **180** may include a base member **184** that may be selectively engageable with the open end **113** in any appropriate manner, including, without limitation via a snap-fit, a threaded engagement, or any appropriate means. The lid assembly **180** may further include a cap **188** that may be selectively positionable relative the base member **184**. The cap **188** may be positionable to and from open and closed positions. In the open position, the cap **188** may allow contents within the blending container **32** to be expelled therefrom. In the closed position, the cap **188** may generally prevent contents of the blending container **32** to be expelled. Further, in the closed position, the cap **188** may be engaged with the base member **184** to create a generally liquid tight seal such that regardless of the position of the blending container **32** the contents within the blending container will not be expelled therefrom. In this closed position, the blending container **32** may be utilized during travel or otherwise in storage of the contents therein.

Alternatively or in addition, the blending system **20** may include a second blending container **233** of a different configuration that the first blending container **233**, such as being a larger size than the first blending container **32**, e.g., the second blending container **233** may have a volume of 40 oz. The second blending container **233** may include at least one spout **280**. Alternatively or in addition, the second blending container **233** may have at second spout **282**. The second blending container **233** also may include at least one handle **300** for ease of use. The second blending container **233** may be vented to allow hot liquids to vent during operation of the blending system **20**. A tamper or other apparatus may be used to agitate the contents of the second blending container **233**, such as know in the art.

The first blending container **32** may be a double-walled container having an inner layer **84** and an outer layer **88** spaced from the inner layer **84**. A space **92** may be formed between the inner and outer layers **84**, **88**. The space **92** may provide an insulative feature to the first blending container **32**, i.e., it may help the contents thereof remain cool or warm, as applicable. Further, the first blending container **32** may include elongated ribs **96** projecting from an interior side **100** of the inner layer **84** into a blending are of the first blending container **32**. The ribs **96** may comprise one or more protrusions generally spanning a length of the blending container **32**. In the present example, there are two ribs spaced at opposing sides of the first blending container **32**. The ribs **96** may be configured to aid in agitating the contents of the first blending container **32** during blending.

As described above, the blending container **32** and blade base **28** may include the interlock feature **34**. The interlock feature **34** may be of any appropriate configuration to

generally prevent access to the blade **124** when it is spinning. As shown in FIG. **3**A, for example, the blending container **32** may include a first tab **192** extending therefrom. As shown in FIG. **3**A, the first tab **192** may include a magnet **196** embedded therein. The at least one magnet **196** may be secured with the blending container **32** in any appropriate manner. By way of a non-limiting example, the magnet **196** may be welded into a pocket **200** formed in the blending container **32** between the inner layer **84** and the outer layer **88**. In a further non-limiting example, the magnet **196** may be adhered, such as through use of an adhesive, between the inner layer **84** and the outer layer **88** of the blending container **32**.

Further, as shown, the blending container **32** may include a second tab **204** extending therefrom. The second tab **204** may be of a similar configuration as the first tab **192**, but may be of a different size. Further, the second tab **204** may be offset from the first tab **192** along the circumference of the blending container **32** at an angle that is not 180 degrees. In other words, the first tab **192** and second tab **204** are not aligned with one another, as described in more detail below. The second tab **204** may include a second magnet **208** embedded therein. The second magnet **208** may be welded into a second pocket **212** formed in the blending container **32** between the inner layer **84** and the outer layer **88**. In a further non-limiting example, the second magnet **208** may be adhered, such as through use of an adhesive, between the inner layer **84** and the outer layer **88** of the blending container **32**. While the first tab **192** and second tab **204** with the magnet **196** and second magnet **208** are shown and described, any number of tabs and magnets may be used without departing from the present teachings. Further still, the number of tabs and magnets utilized are not limited to that shown. Any appropriate number of tabs and magnets may be utilized, e.g., three, four, etc.

In these embodiments, the first magnet **196** and second magnet **208** may be positioned in the tabs **192** and **204**, respectively. Once inserted therein, the inner and outer layers **84**, **88** may be sonic welded together. Once sonic welded, the magnets **196** and **208** are melted into the tabs **192** and **204** capturing the magnets **196** and **208** between the inner and outer layers **84**, **88**.

As shown in FIG. **13**, the blender base **24** may include a lip **216** in the opening **116** in the pedestal **76**; the lip **216** may generally encompass a majority portion or all of the opening **116**. The lip **216** may include first and second recessed portions **220**, **224**. The first and second recessed portions **220**, **224** may be configured such that the tab **192** and second tab **204** are selectively and operatively engageable with such first and second recessed portions **220**, **224**. The first recessed portion **220** may be shaped and sized such that only the first tab **192** may be capable of operatively engaging it. Similarly, the second recessed portion **224** may be shaped and sized such that only the second tab **204** is operatively engageable therewith. This configuration may help align the blending container **32** and blade base **28** with the blender base **24**. As noted above regarding the relative positions of the tab **192** and second tab **204**, the first and second recessed portions **220**, **224** may be offset from one another such that they are not aligned at 180 degrees with respect to one another.

Further each of the first and second recessed portions **220**, **224** may include a sensor, such as a reed switch (not shown) in its proximity. The reed switch may be utilized to indicate when both of the tab **192** and second tab **204** are operatively positioned within the first and second recesses **220**, **224**. Contacts of the reed switch may be in normally open position when the magnets **196** and **208** are not in proximity thereto, i.e., when the tabs **192** and **204** are not positioned in the first and second recessed portions **220**, **224**. When the magnets **196** and **208** within the tabs **192**, **204**, respectively, are moved in operative proximity to the reed switch, the reed switch will close, i.e., the reed switch will close when a magnetic field is present. Once the magnets **196** and **208** are moved away from the switch, the reed switch will go back to its original open position.

When the reed switch is in the open position, the motor **40** is configured to be disabled, i.e., not operate. When the motor **40** is disabled, the blade base **28** and more particularly, the blade **124** is not capable of operation. Therefore, in order to operate the blending system **20**, the blending container **32** and blade base **28** must be operatively coupled with the blender base **24**. Specifically, the tabs **192** and **208** must be operatively positioned within the first and second recessed portions **220**, **224**, respectively in order for the blending system **20** to operate. This generally prevents the user from being able to access or otherwise contact the blade **124**.

The aforementioned interlock feature **34** is further configured to generally prevent circumvention by a user. For example, the reed switch may be calibrated to disengage or disable the motor **40** anytime the magnet **196** or second magnet **208** or both are a predetermined distance away from the reed switch. The predetermined distance may be calibrated so that the user may not create enough space between the blending container **32**, blade base **28** or blender base **24** to access the blade **124**.

While the blending system **20** is operating, i.e., the motor **40** is operating, the blending system **20** tends to attempt to rotate the blending container **32** relative to the blender base **24**. The tabs **192** and **204** being engaged with the first and second recessed portions **220**, **224**, respectively may prevent the blending container **32** from rotating—it may maintain the blending container **32** in its operative position with respect to the blender base **24**. The tabs **192** and **204** may be generally rectangular in shape. Further, the corresponding first and second recessed portions **220**, **224** may be of a corresponding rectangular shape. The rectangular shape may provide the anti-rotation feature generally keeping the interlock feature **34** operatively aligned.

The blade base **28** may further include a gasket **232** configured to provide a seal between the blade base **28** and blending container **32** when coupled together. The gasket **232** may have a generally X-shaped cross section, such as shown in FIG. **10**. The gasket **232** may generally span the periphery of the blade base **28** such that when the blade base **28** and blending container **32** are coupled—such as being threaded together—the gasket **232** is positioned along the entirety of a location of engagement between the blade base **28** and blending container. While the gasket **232** is shown as having a generally X-shaped cross-section, it will be appreciated that the gasket **232** may have any appropriate cross-sectional shape that performs the same function described below. By way of a non-limiting example, the gasket **232** may have a diameter of a narrow portion d_N that is shorter than a diameter of a distended portion d_D, such as shown in FIG. **11**. The gasket **232** may be formed of any appropriate material, including, but not limited to, polymeric materials such as elastomers or rubbers including thermoplastic or thermoset elastomers, rubber-based materials, and other polymers and co-polymers having properties consistent with the features described above.

The gasket **232** may be configured to seal at low pressures and allow gas to exit at pressures that exceed a predeter-

mined pressure within the blending container **32** during operation of the blending system **20**. For example, the gasket **232** may function as a seal when the internal pressure zone within the blending container **32** exists from zero pressure to the predetermined level of pressure. After the internal pressure zone within the blending container **32** exceeds the predetermined level pressure—this may be considered a high pressure condition—the configuration of the gasket **232** may displace the gas within the blending container **32** to safely relieve pressure from the internal pressure zone, as shown in FIG. **11**. The gasket **232**, however, also maintains its operative position between the blending container **32** and the blade base **28** so that material within the blending container **32** does not leak as shown in FIG. **12**.

In operation, if the user requires the blending system **20** to perform a recipe requiring a longer operation time, the friction of the spinning blade **124** may generate heat within the blending container **32**. As the heat in the blending container **32** increases, so does the pressure. As the operation continues, the pressure may continue to build up to a predetermined level. If the force of the internal pressure zone increases above that predetermined level, the gasket **232** is configured to displace that internal pressure to allow interior pressure to escape into the atmosphere. The shape of the gasket **232** allows the internal gas of the blending container **32** to escape while the solids and liquids remain within the blending container **32**. Thus, the pressure within the blending container **32** is generally prevented from exceeding a predetermined level.

The blending system **20** may, however, include a spill moat **236** if any liquid escapes from the blending container **32** either during operation, during insertion of the material to be blending or while expelling the material from the blending container **32**. The spill moat **236** may be of any appropriate configuration and may be positioned in the pedestal **76**. By way of a non-limiting example, the spill moat **236** may be positioned on the periphery of the pedestal **76**. The spill moat **236** may be configured to capture any escaping liquid and allow it to flow along a predetermined path. At a conclusion of the predetermined path of the spill moat **236**, the blender base **24** may include at least one aperture **238**. The aperture **238** may be configured to allow the liquid to exit from the blending system **20**. The combination of the spill moat **236** and aperture **238** may generally prevent liquid from inadvertently entering the blender base **24** and more specifically from entering the working components of the blending system **20**, such as the motor **40**.

Although the embodiments of the present teachings have been illustrated in the accompanying drawings and described in the foregoing detailed description, it is to be understood that the present teachings are not to be limited to just the embodiments disclosed, but that the teachings described herein are capable of numerous rearrangements, modifications and substitutions.

What is claimed is:

1. A blending system comprising:

a base encasing a motor and a splined coupler;

a blade assembly comprising a first side and a second side, the first side comprising one or more blades and the second side comprising a spline, wherein the spline operatively interfaces with the splined coupler, and wherein the blade assembly is selectively engagable with the base;

a container selectively engaged with the blade assembly; and

a gasket operatively positioned between the container and blade assembly, the gasket comprising at least one protrusion extending from a narrow portion and positioned between the container and blade assembly,

wherein the at least one protrusion and the narrow portion operatively create an air-tight seal between the blade assembly and container at a first pressure and allow gas to exit between the container and blade assembly at a second pressure while operatively generally preventing solids from exiting between the container and the blade assembly.

2. The blending system of claim **1**, wherein the gasket has a generally X-shaped cross-section.

3. The blending system of claim **2**, wherein the generally X-shaped cross-section of the gasket has a diameter of the narrow portion, d_N, and a diameter of a distended portion including the at least one protrusion, d_D, wherein $d_{N<}d_D$.

4. The blending system of claim **3**, wherein the first pressure is less than the second pressure.

5. The blending system of claim **1**, wherein the first pressure is less than the second pressure.

6. The blending system of claim **1**, wherein the gasket operatively prevents liquids from exiting between the container and blade assembly at the second pressure.

7. A blending system comprising:

a container comprising an open end and a closed end;

a blade assembly comprises one or more blades and a spline, wherein the blade assembly is selectively engagable with the open end of the container such that the one or more blades extend within the container and the spline extends away from the open end; and

a gasket operatively positioned between the container and blade assembly, the gasket comprising a generally distended portion extending from a general center, and

wherein the gasket operatively prevents liquids and solids from exiting between the container and blade assembly while allowing gas to exit the container at a threshold pressure level.

8. The blending system of claim **7**, wherein the generally distended portion comprises one or more protrusions.

9. The blending system of claim **7**, wherein the generally distended portion extending from the general center forms a generally X-shaped cross-section.

10. The blending system of claim **7**, wherein the generally distended portion comprises rounded edges.

11. The blending system of claim **10**, wherein intersections of the generally distended portion are generally concave.

12. The blending system of claim **7**, wherein the gasket is operatively positioned between the container and the blade assembly, and

wherein at least one side of the gasket is uncovered when the blending system is in operation.

13. A blending system comprising:

a base encasing a motor;

a container;

a blade assembly selectively engaged with an open end of the container, wherein the blade assembly is selectively positioned between the base and the container in an operative position; and

a gasket positioned between the container and blade assembly,

wherein the gasket operatively creates an air-tight seal between the blade assembly and container at a first pressure and allows gas to exit between the container and blade assembly at a second pressure during operation of the motor such that the blending system remains operational.

14. The blending system of claim **13**, wherein the gasket transitions from a first state defined by allowing gas to exit to a second state defined by preventing gas from exiting as pressure changes from the second pressure to the first pressure.

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